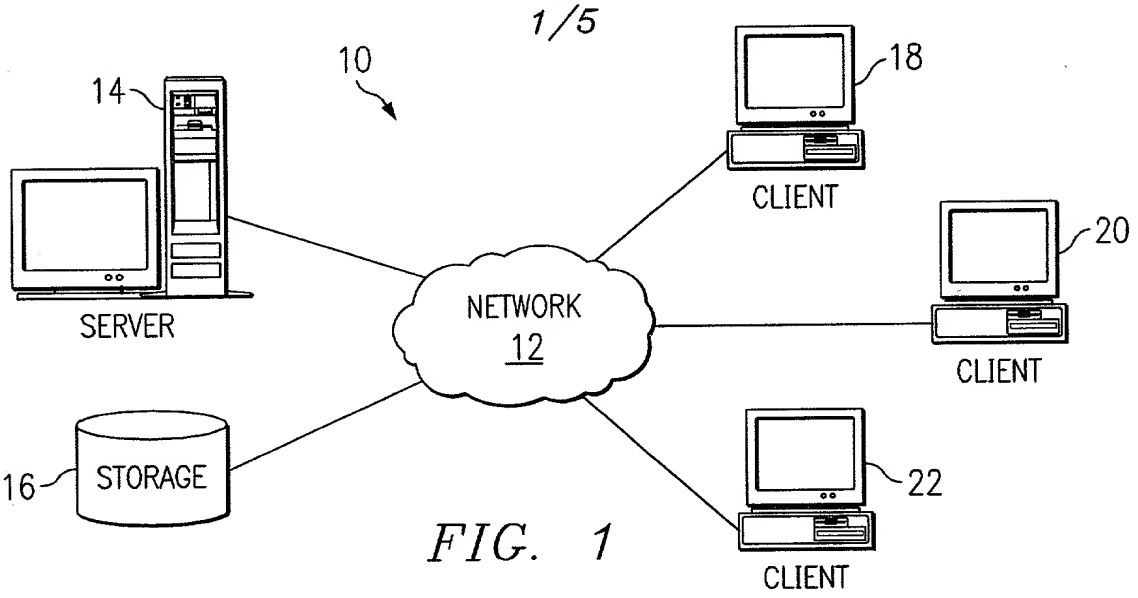

10
14
SERVER
18
CLIENT
20
CLIENT
NETWORK
12
16
STORAGE
22
CLIENT

FIG. 1

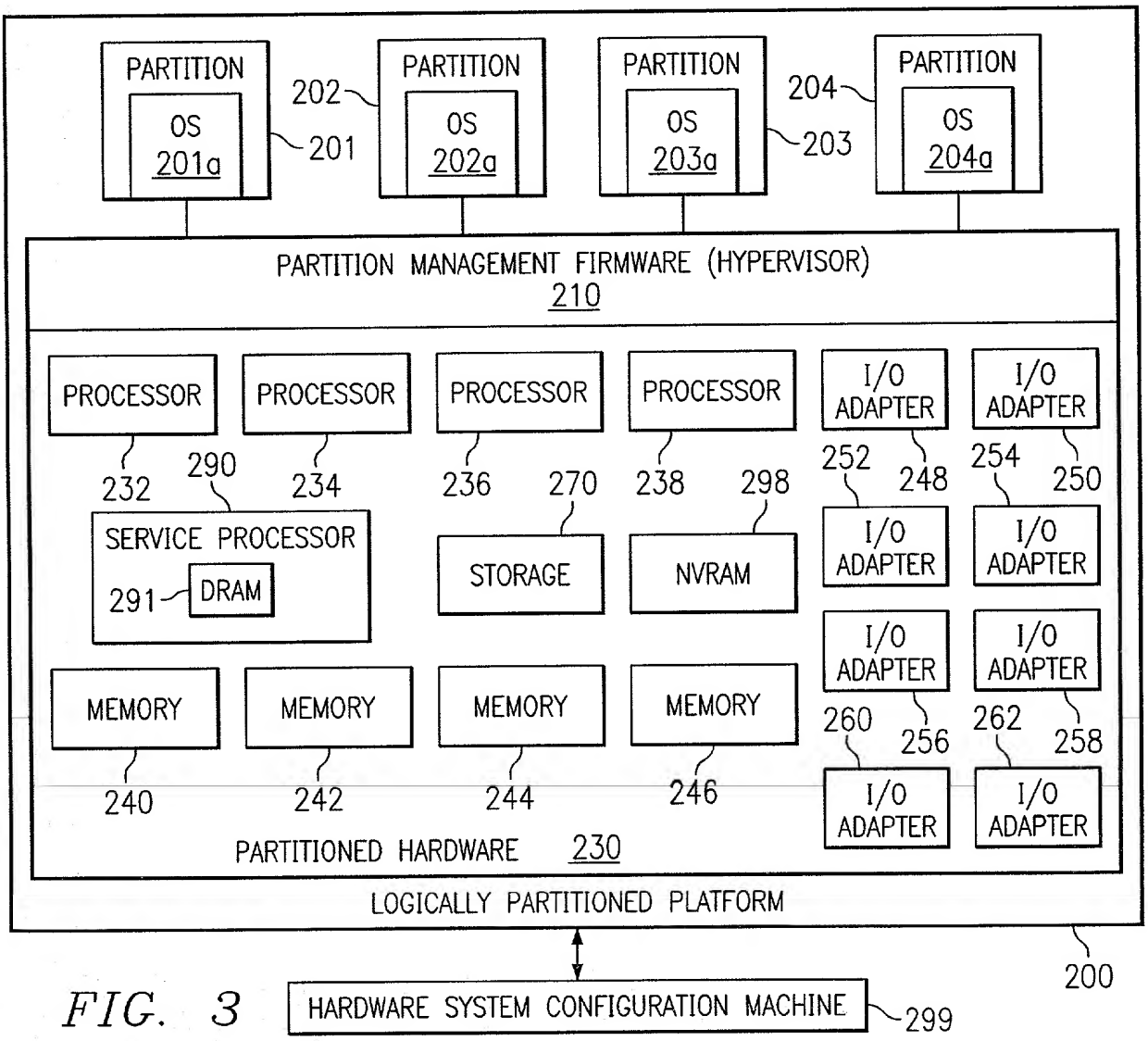

PARTITION
OS
201a
201
202
PARTITION
OS
202a
PARTITION
OS
203a
203
204
PARTITION
OS
204a
PARTITION MANAGEMENT FIRMWARE (HYPERVISOR)
210
PROCESSOR
PROCESSOR
PROCESSOR
PROCESSOR
I/O ADAPTER
I/O ADAPTER
232
290
234
236
270
238
298
252
248
254
250
SERVICE PROCESSOR
291
DRAM
STORAGE
NVRAM
I/O ADAPTER
I/O ADAPTER
I/O ADAPTER
I/O ADAPTER
MEMORY
MEMORY
MEMORY
MEMORY
260
256
262
258
240
242
244
246
I/O ADAPTER
I/O ADAPTER
PARTITIONED HARDWARE 230
LOGICALLY PARTITIONED PLATFORM
200
HARDWARE SYSTEM CONFIGURATION MACHINE
299

FIG. 3

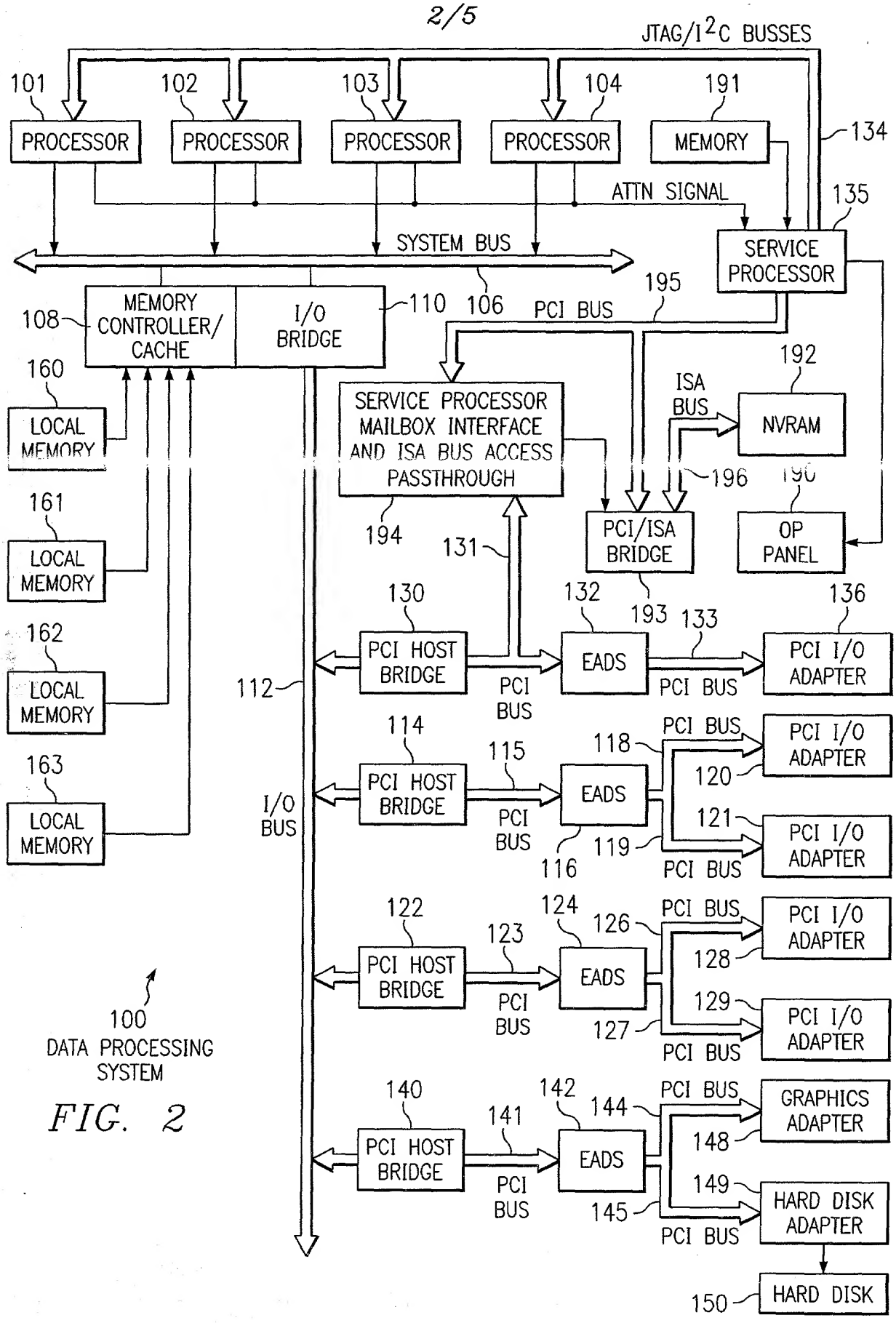
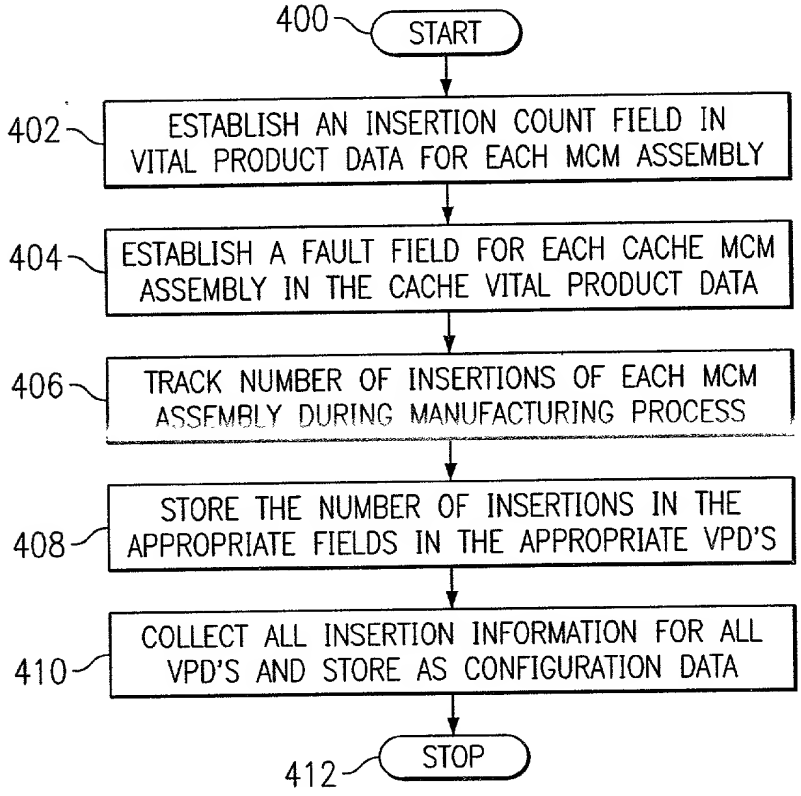

JTAG/I2C BUSSES
101
PROCESSOR
102
PROCESSOR
103
PROCESSOR
104
PROCESSOR
191
MEMORY
134
ATTN SIGNAL
135
SERVICE PROCESSOR
SYSTEM BUS
106
195
PCI BUS
108
MEMORY CONTROLLER/ CACHE
I/O BRIDGE
110
160
LOCAL MEMORY
161
LOCAL MEMORY
162
LOCAL MEMORY
163
LOCAL MEMORY
SERVICE PROCESSOR MAILBOX INTERFACE AND ISA BUS ACCESS PASSTHROUGH
194
131
ISA BUS
192
NVRAM
196
190
OP PANEL
PCI/ISA BRIDGE
193
130
PCI HOST BRIDGE
132
EADS
133
PCI BUS
136
PCI I/O ADAPTER
112
I/O BUS
114
PCI HOST BRIDGE
115
EADS
118
120
121
119
116
122
PCI HOST BRIDGE
123
EADS
124
126
128
129
127
140
PCI HOST BRIDGE
141
EADS
142
144
GRAPHICS ADAPTER
148
149
HARD DISK ADAPTER
145
150
HARD DISK
100
DATA PROCESSING SYSTEM

FIG. 2

FIG. 4



600

FIG. 6

	MCM ASSEMBLY NAME	LOCATION CODE	NUMBER OF TIMES INSERTED		OTHER FILEDS
602	PROCESSOR 1–8	U1.3–P1–C1	2		
604	PROCESSOR 9–16	U1.3–P1–C2	7		
	MCM ASSEMBLY NAME	LOCATION CODE	NUMBER OF TIMES INSERTED	FAULT	OTHER FILEDS
606	L3 MODULE 1	U1.3–P1–C5	3	0	
	L3 MODULE 15	U1.3–P1–C19	10	1	
	L3 MODULE 16	U1.3–P1–C19	1	0	

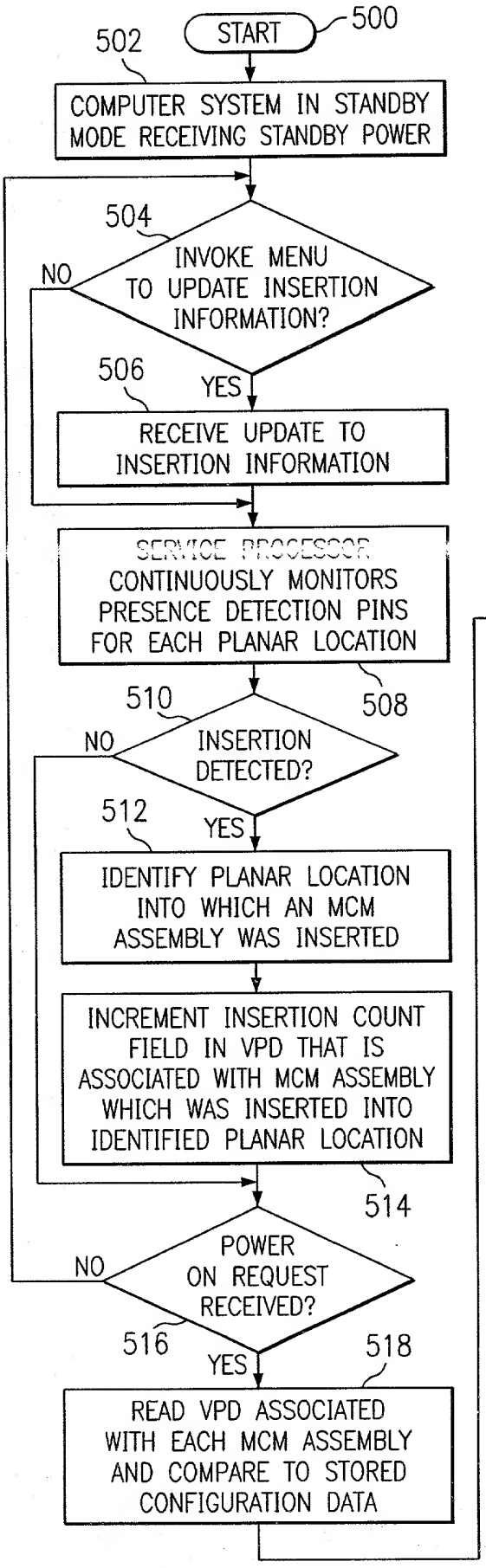
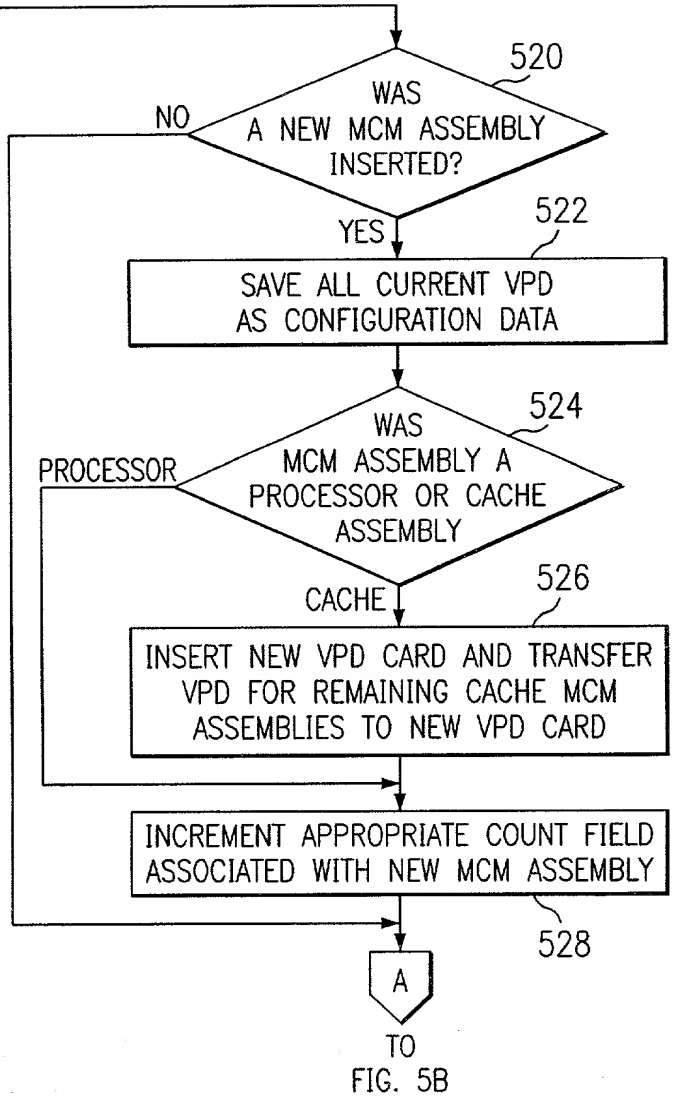

START
500
502
COMPUTER SYSTEM IN STANDBY MODE RECEIVING STANDBY POWER
504
INVOKE MENU TO UPDATE INSERTION INFORMATION?
NO
YES
506
RECEIVE UPDATE TO INSERTION INFORMATION
SERVICE PROCESSOR CONTINUOUSLY MONITORS PRESENCE DETECTION PINS FOR EACH PLANAR LOCATION
508
510
INSERTION DETECTED?
NO
YES
512
IDENTIFY PLANAR LOCATION INTO WHICH AN MCM ASSEMBLY WAS INSERTED
INCREMENT INSERTION COUNT FIELD IN VPD THAT IS ASSOCIATED WITH MCM ASSEMBLY WHICH WAS INSERTED INTO IDENTIFIED PLANAR LOCATION
514
POWER ON REQUEST RECEIVED?
NO
516
YES
518
READ VPD ASSOCIATED WITH EACH MCM ASSEMBLY AND COMPARE TO STORED CONFIGURATION DATA

FIG. 5A


520
WAS A NEW MCM ASSEMBLY INSERTED?
NO
YES
522
SAVE ALL CURRENT VPD AS CONFIGURATION DATA
524
WAS MCM ASSEMBLY A PROCESSOR OR CACHE ASSEMBLY
PROCESSOR
CACHE
526
INSERT NEW VPD CARD AND TRANSFER VPD FOR REMAINING CACHE MCM ASSEMBLIES TO NEW VPD CARD
INCREMENT APPROPRIATE COUNT FIELD ASSOCIATED WITH NEW MCM ASSEMBLY
528
A
TO FIG. 5B

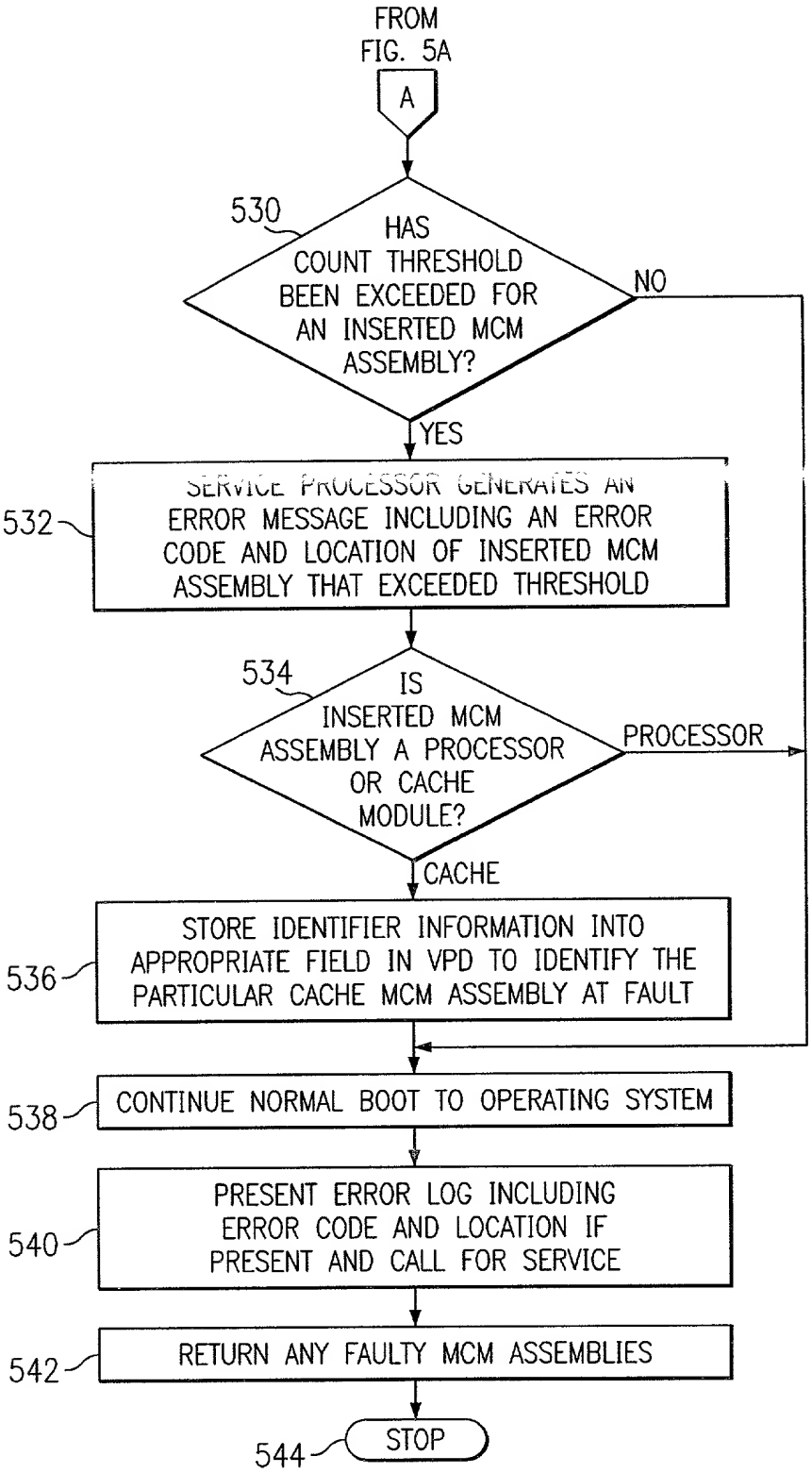

FROM
FIG. 5A
A
530
HAS
COUNT THRESHOLD
BEEN EXCEEDED FOR
AN INSERTED MCM
ASSEMBLY?
NO
YES
532
SERVICE PROCESSOR GENERATES AN
ERROR MESSAGE INCLUDING AN ERROR
CODE AND LOCATION OF INSERTED MCM
ASSEMBLY THAT EXCEEDED THRESHOLD
534
IS
INSERTED MCM
ASSEMBLY A PROCESSOR
OR CACHE
MODULE?
PROCESSOR
CACHE
536
STORE IDENTIFIER INFORMATION INTO
APPROPRIATE FIELD IN VPD TO IDENTIFY THE
PARTICULAR CACHE MCM ASSEMBLY AT FAULT
538
CONTINUE NORMAL BOOT TO OPERATING SYSTEM
540
PRESENT ERROR LOG INCLUDING
ERROR CODE AND LOCATION IF
PRESENT AND CALL FOR SERVICE
542
RETURN ANY FAULTY MCM ASSEMBLIES
544
STOP

FIG. 5B